

## CLAIMS

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A glenoid plastic prosthesis for cementation comprising a pear-shaped body having a major axis extending along the largest diameter of said pear-shaped body, said body having a concave articular surface facing laterally and an opposing convex medial surface with a keel extending from said convex medial surface, said keel having a plane of symmetry perpendicular to the major axis of the body, having above and below it one or more peg
2. Said concave articular surface of the prosthesis of claim 1 having one or more radiuses on the sagittal plane and one or more radiuses in the transverse plane defining a non constraining articular surface for a humeral head.
3. Said convex medial surface and said keel having a substantially reticular indentation on its surface, means to enhance the implant cement interface
4. Said reticular indentation being alternatively defined by fractal geometry.
5. Said keel being substantially rectangular in shape and having a plurality of holes allowing cement penetration.
6. Said keel being substantially trapezoidal in shape and having a plurality of holes allowing cement penetration.

7. The glenoid plastic implant of claim 1 wherein one or more threaded pegs are above the keel and one or more threaded pegs are below the keel.
8. A method and tools for implanting the prosthesis of claim 1 comprising
  - a. a precise exposure of the bony margins of the glenoid and of its subchondral bone by predetermined means;
  - b. a pear-shaped size drill guide with changeable head sizes, means to evaluate the dimensions of said glenoid and to drill holes in said glenoid;
  - c. a glenoid-marking tool;
  - d. and a glenoid indentation tool.
9. Said drill holes being horizontally disposed, preparation for a cavity for said keel.
10. Said cavity for the keel being created by connecting the horizontal drill holes and by gradually compacting the bone of the central glenoid with predetermined means thereby increasing the density and resistance of its walls.
11. In another embodiment, drill holes being above and below said cavity for the keel.
12. Said drill holes being destined for said threaded pegs
13. The drill holes for the threaded pegs being of a larger diameter than that of the pegs

14. The drill holes for the threaded pegs having internal threads cut with a tap.
15. A pear-shaped convex marking tool with a handle and a plurality of blades being disposed on a substantially fractal pattern, means to make indents of predetermined depth in the glenoid bone after exposition of its subchondral bone by predetermined means.
16. In yet another embodiment, indentations of predetermined depth being made in the walls of the cavity in the glenoid for the horizontal keel with a glenoid indentation tool.
17. Whereby enhancing the hold of the implant in the bone after cementation.